Fleet Management Limited

Passage Plan

Section 1: General information

Vessel's Name	HAKO
Voyage Number	02
Vessel's Condition	Loaded
Target Speed	12.5
Target RPM	70
Total Steaming Time	1D 17H 30M
Total distance to go	519
Max height above Keel (in Meters)	47.4
Max Summer Draft	13.318

Departure Port Information	
Name of the Port	PRINCE RUPERT
ETD	17 JULY / 0800 LT
Time Zone	+7
Estimated ROB's on Departure	
HFO	580
MDO/MGO	32.8
FW	140
MECYL	10850

Departure Draft (mtrs)	
Fore	**11.83**
Aft	**11.83**
Max Air Draft	**35.57**
Density	**1.020**
Arrival Draft (mtrs)	
Fore	**11.82**
Aft	**11.82**
Max Air Draft	**35.58**
Density	**1.025**

Arrival Port Information	
Name of the Port	VANCOUVER
ETA	18 JULY / 0130 LT
Time Zone	+7
Estimated ROB's on Arrival	
HFO	545
MDO/MGO	32.8
FW	140
MECYL	10550

Consumptions / Day in MT	
HFO	25
MDO/MGO	0
L.O.- ME CYL Ltrs/day	115
Fresh Water Data	
FW Consumption/ day in MT	10
FW Production / day in MT	20
Net Gain / Loss / day in MT	10

Block Coefficient	**0.86**
Clock to be advanced/Retarded during voyage	
Clocks	Not Applicable
Duration	Not Applicable
If the vessel is Crossing International Date line	
Date of Crossing	Not Applicable
Day Advance/ Retard	Not Applicable

Section 2B: Voyage Appraisal on ECDIS

A. CHECKLIST FOR VOYAGE PLANNING ON ECDIS

a) Does vessel have Largest Scale ENCs for all Sea Areas of the proposed voyage? — Yes ☑ No ☐
(All ENCs to comply with IHO chart data transfer standard S-57)

b) If answer to (a) is "No", does vessel have the required Paper charts? — Yes ☐ No ☐ N/A ☑
(If answer is "No", carry out Risk Assessment to identify hazards and control measures)

c) Check that ENC permits are valid for the duration of voyage. ☑
(Contracted ENC distributor to be notified in case the validity needs to be extended)

d) Check that latest corrections have been applied to ENCs. ☑ Last Correction no. with Date: 28/2014 12/07/2014
(From update CD issued by ENC distributor or updates received on email)

e) Check that controlling operational data is updated in ECDIS. ☑
(Max Draft, Air-draft, Turning Data, Min UKC, Look Ahead Dist, etc.)

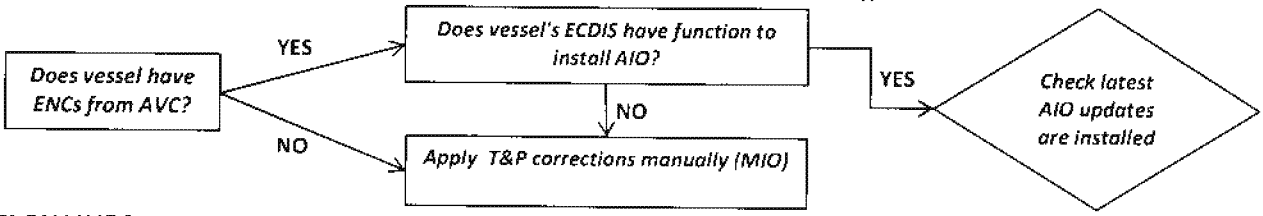
f) Check that data input from Bridge equipment is displayed on ECDIS. ☑
(Input from GPS, Gyro & Log is mandatory. In addition, there may be interface with other Bridge equipment like AIS, Radar, Auto-pilot, VDR, NAVTEX, etc.)

g) Check that geodetic datum on GPS is set to WGS-84. ☑

h) Check that all warning alarms on ECDIS are activated & functional. ☑
(Includes inbuilt system fault/failure alarms & user defined principal alarms)

i) Verify Principal alarm settings. A list of alarms to be posted near ECDIS. ☑
(Safety contours, safety depth, area with special conditions, X-track alarm, safety zone, CPA/TCPA, etc.)

j) Check that latest T&P corrections are incorporated on ENCs *(refer flow chart)* ☑ Last Correction no. with Date: _____
(AIO: Admiralty Information Overlay, MIO: Mariner's Information Overlay)



B. BELOW INFORMATION TO BE MARKED ON ENCs (same as normally done on paper charts)

a) Locations for: SPEED REDUCTION / UNLASHING ANCHORS / ECHO SOUNDER "ON" ☑

b) Areas where 2 Steering motors to be switched "on" *(if applicable)* ☑

c) Landfall targets & Lights / Prominent Navigation & Radar conspicuous marks ☑

d) Abort Point *(refer BPM Sec-3.3)* ☑

e) Areas of significant Tides & Currents / Minimum UKC / Possibility of banking effect ☑

f) Parallel Indexing while in pilotage areas and during coastal navigation if applicable ☑

g) Clearing Lines & Bearings / Heading Marks / Leading Lines ☑

h) No-go Areas *(Mainly for dangers to navigation close to the charted track)* ☑

i) Wheel-over Position ☑

j) Contingency Anchorage ☑

k) VTS / Port Control / Pilot Station Reporting Points ☑

l) Cautionary Areas / Areas where heavy traffic or crossing traffic expected ☑

m) Boundary of Special Areas *(eg. SECA, ECA, Right Whale Area, Great Barrier Reef, etc.)* ☑

n) Nav warnings transmitted by satellite, Navtex, coast stations on VHF, etc. ☑

"CARRY OUT A THOROUGH APPRAISAL FOR EACH LEG OF THE VOYAGE BY ROUTE CHECK SIMULATION"

Fleet Management Limited

Section 3: Publications

M.V / M.T. HAKO Voyage No: 02

Voyage Charts corrected upto: **22/2014** NTM Number

Applicable Admiralty List of Radio Signals			
List of Radio Signals	Latest Edition	Edition on board	Corrected to NTM No.
NP286(5) Volume 6 - Part 5, North America, Canada and Greenland	2013/14	2013/14	

Applicable List of Sailing Directions			
Sailing Directions	Latest Edition	Edition on board	Corrected to NTM No.
NP25 British Columbia Pilot Vol 1	15th ED.	15th ED.	
NP26 British Columbia Pilot Vol 2	10th ED.	10th ED.	

Applicable Admiralty List of Lights and fog signals			
List of Lights	Latest Edition	Edition on board	Corrected to NTM No.
NP80 Volume G: Western Side of South Atlantic and East Pacific Ocean; from Cabo Orange to Point Barrow, and Hawaiian Islands	2013/14	2013/14	

Applicable Admiralty Tide tables			
Tide tables	Latest Edition	Edition on board	Corrected to NTM No.
NP204 Volume 4, Pacific Ocean (including Tidal Stream Tables)	2014	2014	

Details of latest Radio/ Electronic Broadcasts (Add any other information in the blank spaces provided)		
Details	Latest warning available	Applied on charts
Navareas/ Hydrolants/ Hydropac warnings	YES	YES
Vessel's present Navarea	NAV. AREA XII	YES
Navareas to be transited		
Navtex /local area warnings?	YES	YES
Navtex Areas selected	ALL	YES
Weather Facsimile broadcasts (List the Chart station)	POINT REYES	YES
Ocean routeing services	AWT	YES
Radio Weather Broadcasts?	COMOX	YES
Inmarsat Broadcasts (EGC warnings)	YES	YES
Special area warnings	YES	YES

Applicable Miscellaneous publications (Add any other publication in use in the blank spaces provided)			
Publication	Latest Edition	Edition on board	Remarks
NP 131 Chart Catalogue	2014	2014	
NP 136 Ocean Passages of the world	5th ED.	5th ED.	
NP 100 Mariners hand book	9th ED.	9th ED.	
Guide to port entry	2013/14	2013/14	
Admiralty Co-Tidal Atlas			
Tidal Stream Atlas			
Load line Chart	Edition 2	Edition 2	
Routeing charts & Guidance for Laden tanker routes off Dutch coast and South Africa	DEC. 2013	DEC. 2013	
NP 735 IALA Buoyage System	Arrival port		Dep. Port
	Region B		Region B

Section 4: Tides and current

M.V./M.T.: HAKO Voyage No: 02

Departure Port

1) Departure Date: **17-Jul-14**

2) Departure Time: 0800 LT

3) ***Tides***

	TIME	HEIGHT
i. High water	0449 LT	6.1
ii. Low water	1101 LT	1.0

4) ***Tidal Stream***

i. Rate

ii. Direction

Arrival Port

1) Arrival Date: **18-Jul-14**

2) Arrival Time: 0800 LT

3) ***Tides***

	TIME	HEIGHT
i. High water	1033 LT	3.5
ii. Low water	0443 LT	1.8

4) ***Tidal Stream***

i. Rate

ii. Direction

During The Passage(Straits, channels, Ocean Currents etc)

1) Position

2) Arrival Date

3) Arrival Time

4) ***Tides***

	TIME	HEIGHT
i. High water		
ii. Low water		

5) ***Tidal Stream***

i. Rate

ii. Direction

6) ***Currents***

i Name			
ii. Rate			
iii Direction			

Section 5: Weather conditions

M.V./M.T.: HAKO

Voyage No: 02

Navtex Station
PRINCE RUPERT
TOFINO

Weather Fax Station
POINT REYES
KODIAK

1) Are Weather Routing Services being provided ? Yes

Which organization is providing these services ? AWT

Is the routine weather routing format/report available? YES

2) What are the expected weather conditions on during the passage ?

SLIGHT SEA

3) What is the max height of swell expected at Departure/ Arrival port & during Sea passage ?

1 - 2 METERS

4) What is the max wind speed expected at Departure/ Arrival port & during Sea passage ?

10 - 30 KTS.

5) What is the max / minimum temperature likely to encounter during voyage ?

18 - 23

6) Is the vessel expected to experience areas with restricted visibility during the passage, if yes, please list the way point no's where restricted visibility may be encountered.

NO

7) Is the vessel expected to encounter ice during passage, if yes please advise precautions taken ?

NO

8) Is the vessel expected to encounter any Tropical Cyclones / Typhoons / Tropical Depression / Hurricanes during voyage ?

NO

9) What is the GM of the vessel on Departure, Arrival & expected minimum GM during Sea passage ?

Departure	3.15	Arrival	3.15	Passage	3.15

Section 6: Reporting Details

M.V./M.T.: HAKO Voyage No: 02

A) ENOA / D

1. ENOA/D to send (For US Calling vessels only) — NA
   If Yes , Expected Date of submission ENOA/D to NVMC/ SANS — Date
2. Expected Date of submission ENOA/D to OFFICE REVIEW — Date

Reminder:

1) Vessel to send ENOA for office review prior sending same to NVMC and ENOA has to be forwarded to NVMC at least 96 hrs prior entering US Waters (Voyage type = Foreign to US).

2) Vessels calling US Waters are required to send completed passage plan copies duly signed by the Master and other Navigating Officers to Office on email ID fleet- ccmnav@fleetship.com prior entering US Waters.

3) Vessels calling US to US port (different COTP zone) are required to send 'E-NOA with voyage type US to US'.

4) Vessels departing US ports are required to send completed passage plan copies duly signed by the Master and other Navigating Officers to Office on email ID fleet- ccmnav@fleetship.com prior vessel's departure.

5)Vessel to send ENOD for office review prior sending same to NVMC and ENOD has to be forwarded to NVMC atleast 6 hours prior departing the berth (Voyage type = US to Foreign).

Remarks (If any)

B) PILOTS

1. How many days pre arrival notice to be given to Pilot station at arrival port.

Days 2, 1 **Hrs** 12, 4

2. Means of Communication with pilot station (Email, VHF etc)

VHF Channels 16, 17 **Email address** colley@colleywest.bc.ca

Any other means VIA AGENT

Remarks (If any)

CAN CONTACT PILOT VIA TEL. 12503633878 / FAX: 12503633293 / TELEX: 210497236PPAPILOTS VIC

C) VTS (Vessel traffic system)/ Ship's position reports during the voyage :

VTS Sector	Reporting Position	VTS Callsign	VHF Channel	Remarks
SECTOR 2	Pilotage area	Prince Rupert	16, 71	
		Traffic		
SECTOR 1	Rose Spit and Seal Rocks	Prince Rupert	16, 11	
		Traffic		
	Triangle Island	Tofino Traffic	16, 74	
	Along 124-40 W	Seatle Traffic	16, 05A	
SECTOR 1	Race Rocks	Victoria Traffic	16, 11	
SECTOR 3	Lona Lt.	Vancouver	16, 12	
		Traffic		

Is Vessel participating in any SRS Ship reporting system (eg AMVER/ AUSREP/ JASREP etc) — No

Remarks (If any)

VESSEL WILL SAIL ONLY ALONG BRITISH COLOMBIA COAST FROM PRINCE RUPERT TO VANCOUVER.

D) CHARTERERS/ Agents

1. Is any notice required to be given to Charterers/agents prior departure / Arrival and by what means — Yes

2. Means of Communication with Charterers/agents

Email address shipops@manshipping.co.uk **Email address**

Email address **Email address**

Any other means

3. Interval of notices to Charterers/agents, Please state days/ hrs

Days Daily at Noon **Hrs**

Remarks (If any)

Section 7: BRIDGE MANAGEMENT TEAM

M.V./M.T.: HAKO Voyage No: 02

Note: Cadets and any other ratings without appropriate certification should not be part of the bridge team.

1. AT SEA

RESPONSIBILITY	0000 - 0400 & 1200 - 1600	0400-0800 & 1600- 2000	0800 – 1200 & 2000 - 2400
OOW	SECOND OFFICER	CHIEF OFFICER	THIRD OFFICER
Lookout	AB-1 ERWIN	AB-2 TAMMY	AB-3 DANILO

2. AT SEA, IN RESTRICTED VISIBILITY

RESPONSIBILITY	0000 - 0400 & 1200 - 1600	0400-0800 & 1600- 2000	0800 – 1200 & 2000 - 2400
Master should be present on bridge in case of high traffic density or any other time deemed necessary by him.			
OOW	SECOND OFFICER	CHIEF OFFICER	THIRD OFFICER
Lookout	OS	OS / BOSUN	BOSUN
Helmsman (If required)	AB-1 ERWIN	AB-2 TAMMY	AB-3 DANILO

NOTE:

1. Master should be notified if visibility deteriorates below 5 nautical miles or greater distance at Master's discretion.

2. Helmsman should be posted in addition to lookout if considered necessary.

3. ARRIVAL/ DEPARTURE PORTS, and/ or IN CONGESTED WATERS

RESPONSIBILITY	0000 - 0400 & 1200 - 1600	0400-0800 & 1600- 2000	0800 – 1200 & 2000 - 2400
Master should be present on bridge during the time of arrival/ departure port.			
OOW	SECOND OFFICER	CHIEF OFFICER	THIRD OFFICER
Helmsman	AB-1 ERWIN	AB-2 TAMMY	AB-3 DANILO
Lookout	OS	OS / BOSUN	BOSUN

4. PILOTAGE WATERS

RESPONSIBILITY	0000 - 0400 & 1200 - 1600	0400-0800 & 1600- 2000	0800 – 1200 & 2000 - 2400
Master should be present on bridge during the pilotage.			
OOW	SECOND OFFICER	CHIEF OFFICER	THIRD OFFICER
Helmsman	AB-1 ERWIN	AB-2 TAMMY	AB-3 DANILO
Lookout	OS	OS / BOSUN	BOSUN

Note: Under prolonged pilotage or similar circumstances, or if he is tired, the Master may at his discretion, be relieved by the Chief Officer.

5. HIGHEST LEVEL OF BRIDGE MANNING (AT MASTER'S DISCRETION)

RESPONSIBILITY	0000 - 0400 & 1200 - 1600	0400-0800 & 1600- 2000	0800 – 1200 & 2000 - 2400
Master should be present on bridge during this Manning Level.			
OOW	SECOND OFFICER	CHIEF OFFICER	THIRD OFFICER
Additional Officer			
Helmsman	AB-1 ERWIN	AB-2 TAMMY	AB-3 DANILO
Lookout	OS	OS / BOSUN	BOSUN

Note: Some examples of the situations requiring the Highest level of Bridge Manning are Arrival / Departure Ports, Congested Waters, Heavy Traffic, Restricted Visibility, Malfunction of Navigation Equipments etc.

Section 8: ISPS requirements

M.V./M.T.: HAKO Voyage No: 02

ARRIVAL PORT/ COUNTRY **VANCOUVER, CANADA**

BERTH NAME /NUMBER: BUNKERING ANCHORAGE

SECURITY LEVEL IN PORT 1

SECURITY LEVEL OF THE VESSEL 1

ANY ADDITIONAL MEASURES TO BE TAKEN DUE TO SECURITY ALERTS :

N/A

AT SEA

1. is the vessel expected to pass through Piracy prone area ? **No**

2. Is the SSAS in good working order ? **Yes**

   Date of last testing of SSAS: 22 June 2014

3. Are all security equipment in good working order ? **Yes**

   (AIS / Torches / Night vision binoculars /Additional lights/ Radar etc)

4. Have Anti Piracy watches been planned and relevant duties explained to staff on board ? **Not applicable**

5. Give brief description of areas which require high vigilance :

N/A

Section 9: Environmental requirements

M.V/M.T HAKO Voyage No: 02

(Reminder: Master to get latest local regulations from agents well in advance in order to comply fully with all local regulations well in time)

1) Is the vessel expected to transit Particular sensitive Sea Areas (PSSA) — **No**

Area — Not applicable

a. Point at which master is to be called marked on chart — **Not Applicable**

b. All overboard v/v to be sealed and locked so as to prevent any grey water overboard ? — **Not Applicable**

c. Have all concerned personnel been informed that "No deballasting operations to be carried out" — **Not Applicable**

d. Have all concerned personnel been informed that No deck washing or Hatch cover testing to be carried out while at anchorage / berth? — **Not Applicable**

2) Is the vessel expected to enter Marpol Annex 1 special areas enroute ? — **Not Applicable**

Sr. No.	MARPOL ANNEX 1 AREAS	DATE /TIME OF ENTRY
1	Not applicable	
2		
3		
4		
5		
6		

3) Is the vessel expected to enter Marpol Annex 5 special areas enroute ? — **Not Applicable**

Sr. No.	MARPOL ANNEX V AREAS	DATE/ TIME OF ENTRY
1	Not applicable	
2		
3		
4		
5		
6		

4) Is the vessel expected to enter SECA/ECA area, if yes please advise if vessel complies with SECA/ECA plan (QMS 90A). — **Yes**

Sr. No.	SECA/ECA AREAS	DATE / TIME OF ENTRY
1	Areas covered by ECA	Entire voyage will be in ECA area only.
2		Presently vessel is in ECA area
3		
4		

5) Does the vessel have sufficient LSFO for its entire duration of stay in the SECA/ECA areas? — **No**

Section 9: Environmental requirements

M.V/M.T HAKO Voyage No: 02

6) Does the vessel have sufficient MGO to comply with the EU Directive?	Not Applicable
7) If calling California, Does the vessel have sufficient MGO to comply with the local regulations? **(When the vessel arrives within 24 nautical miles of California coast, the vessel will be required to use in their Main Engine/ Auxiliary engines/ boilers, Marine gas oil(MGO) with a 0.1% sulphur cap and Marine diesel oil (MDO) with a 0.1% sulphur cap.)**	Not Applicable
8) Is Ballast water exchange required to be carried out ?	Not Applicable
9) Has the vessel been supplied with refractometer and same working in order?	Yes
10) On Bulk carriers and General cargo vessels, has the disposal of Cargo residues been recorded in Garbage Record Book.	Not Applicable
Date of Last entry:	Not Applicable
11) Is the vessel calling any port with special sewage or grey water regulations in force ?	No
12) If trading on US East Coast (Southeastern Atlantic and mid-Atlantic US waters), are speed restrictions to protect endangered right whales maintained and marked on respective Charts? **(The 10-knot speed restriction will extend out to 20 nautical miles around major mid-Atlantic ports each year in the following approximate locations at the following times.)**	Not Applicable
Area	Not applicable

Chief Officer

Chief Engineer

Section 10: Contingencies

M.V./M.T.: HAKO Voyage No: 02

1. **Tug Failure**

   Master shall inform forward & aft station in order to deal with any emergencies

   Vessel should rig fenders to minimize the contact damage.

2. **Please refer to Emergency Procedure Manual Section 4 for following Emergencies :**

   Fire / Main Engine Failure / Casuality / Terrorism / Gyro Failure / Steering gear failure / Oil / Cargo Spill ETC

3. **Incapacity of Pilot**

   Master shall take over the Con of the vessel

   Master shall notify Pilot Station and Tugs if applicable

   Master should proceed to safe contingency anchorage

   Master should notify all vessel in the vicinity

   Crew should be standby forward station along with C/O for possible anchoring

4. **Port Of Refuge**

   List out possible 'Port of Refuge'.

   Port of refuge should be a port where necessary assistance can be provided to the vessel immediately for example assistance for Machinery repairs, Medical Assistance, and possibility of discharging cargo for further transshipment)

1 VICTORIA

2

3

4

5

5 General Precautions for the Voyage :

SHARP LOOKOUT AT ALL TIMES AS VESSEL SAILING IN EXPECTED HEAVYTRAFFIC AND IN THE EXPECTED PRESENCE OF PLEASURE CRAFTS AND FISHING BOATS.

Section 11: Departure Port - Passage from Berth to Pilot Station

M.V HAKO

Voyage No. 02

WP	Name/ Reference	Latitude			Longitude			T/CO	DIST	DTG	Position Plotting Interval	METHOD OF POSITION FIXING		UKC CALCULATION AT EVERY WAY POINT (mtr)					
		Deg	Min	'N/S	Deg	Min	'E/W					Primary method	Secondary method	Deepest Draft	Expected Height of Tide	Intended transit Speed	Squat	Min. Charted Depth	UKC
1	GRAIN BERTH	54*	13.950'	N	130*	20.200'	W			21.7	5 mins or less	Visual/Radar	GPS	11.83	3.55	6	0.62	13.9	5.00
2	RIDLEY TERMINAL	54*	13.531'	N	130*	21.028'	W	229.2	0.6	21.0	5 mins or less	Visual/Radar	GPS	11.83	3.55	10	1.72	33	23.00
3	BUOY D43	54*	12.805'	N	130*	21.365'	W	195.2	0.8	20.3	5 mins or less	Visual/Radar	GPS	11.83	3.55	10	1.72	34	24.00
4	BUOY D43	54*	12.533'	N	130*	22.016'	W	234.5	0.5	19.8	5 mins or less	Visual/Radar	GPS	11.83	3.55	12.5	2.69	37	26.03
5	KINAHAN IS.	54*	13.313'	N	130*	23.631'	W	309.5	1.2	18.6	5 mins or less	Visual/Radar	GPS	11.83	3.55	12.5	2.69	45	34.03
6	ALEXANDRA BK	54*	13.473'	N	130*	34.975'	W	271.4	6.6	11.9	5 mins or less	Visual/Radar	GPS	11.83	3.55	12.5	1.35	62	52.37
7	PILOT STN.	54*	19.020'	N	130*	53.039'	W	297.7	11.9	0.0	5 mins or less	Visual/Radar	GPS	11.83	3.55	10	0.86	229	219.86

Note: Increase in draft forward or aft due to squat effect could be more than mean draft increase. Squat is likely to result in an increase in forward draft if the block coefficient is > 0.7 and increase in aft draft if the block coefficient is < 0.7.

Section 12: Sea Passage - Passage from Pilot Station to Pilot Station

M.V HAKO

Voyage No. 02

*** - A longer route should always be accepted in preference to shorter more hazardous route.

WP	Name/ Reference	Latitude			Longitude			T/CO	DIST	DTG	Position Plotting Interval	METHOD OF POSITION FIXING		Min Distance (NM) from Nearest Land/Hazard	UKC Calculation (mtr)				
		Deg	Min	'N/S	Deg	Min	'E/W					Primary method	Secondary method		Deepest Draft	Intended transit Speed	Squat	Min. Charted Depth	UKC
7	PILOT STN.	54*	19.020'	N	130*	53.039'	W			518.6	5 mins or less	Visual/Radar	GPS	1.0	11.83	10	0.86	229	216.31
8	BUOY D60	54*	18.941'	N	130*	57.463'	W	268.3	2.6	516.0	10 mins or less	Visual/Radar	GPS	1.3	11.83	12.5	1.35	77	63.82
9	BUTTERWORTH RK	54*	15.022'	N	131*	01.751'	W	212.6	4.7	511.3	15 mins	Visual/Radar	GPS	1.6	11.83	12.5	1.35	100	86.82
10	BONILLA IS.	53*	29.062'	N	130*	51.741'	W	172.7	46.3	465.0	30 mins	Visual/Radar	GPS	7.6	11.83	12.5	1.35	80	66.82
11	TRIANGLE IS.	50*	44.950'	N	129*	13.841'	W	159.8	174.8	290.2	60 mins	Visual/Radar	GPS	7.4	11.83	12.5	1.35	125	111.82
12	BROOKS PEN.	49*	59.319'	N	128*	05.070'	W	136.1	63.4	226.8	60 mins	Visual/Radar	GPS	8.9	11.83	12.5	1.35	600	586.82
13	QUISTIS POINT	48*	52.108'	N	125*	56.002'	W	128.6	107.7	119.1	30 mins	Visual/Radar	GPS	2.9	11.83	12.5	1.35	60	46.82
14	J. DE FUCA ENT.	48*	28.462'	N	125*	14.995'	W	131.0	36.0	83.1	30 mins	Visual/Radar	GPS	10.0	11.83	12.5	1.35	153	139.82
15	J.D. FUCA LT. BY	48*	28.600'	N	124*	43.500'	W	089.6	20.9	62.1	15 mins	Visual/Radar	GPS	1.0	11.83	12.5	1.35	256	242.82
15	TSS	48*	13.500'	N	123*	55.000'	W	115.0	35.7	26.5	15 mins	Visual/Radar	GPS	3.5	11.83	10	0.86	157	144.31
17	RACE ROCK SOUTH	48*	13.500'	N	123*	32.000'	W	090.0	15.3	11.1	10 mins or less	Visual/Radar	GPS	0.6	11.83	8	0.56	148	135.61
18	RACE ROCK EAST	48*	15.000'	N	123*	27.000'	W	065.8	3.7	7.5	5 mins or less	Visual/Radar	GPS	1.2	11.83	8	0.56	153	140.61
19	VICTORIA P/STN	48*	22.000'	N	123*	23.100'	W	020.4	7.5	0.0	5 mins or less	Visual/Radar	GPS	2.3	11.83	6	0.31	95	82.86

Note: Increase in draft forward or aft due to squat effect could be more than mean draft increase. Squat is likely to result in an increase in forward draft if the block coefficient is > 0.7 and increase in aft draft if the block coefficient is < 0.7.

Section 13A: Arrival Port - Passage from Pilot Station to Berth

M.V HAKO

Voyage No. 02

WP	Name/ Reference	Latitude			Longitude			T/CO	DIST	DTG	Position Plotting Interval	METHOD OF POSITION FIXING		UKC CALCULATION AT EVERY WAY POINT (mtr)					
		Deg	Min	'N/S	Deg	Min	'E/W					Primary method	Secondary method	Deepest Draft	Expected Height of Tide	Intended transit Speed	Squat	Min. Charted Depth	UKC
19	VICTORIA P/STN	48*	22.000'	N	123*	23.100'	W			85.2	5 mins or less	Visual/Radar	GPS	11.82	1.60	6		95	84.78
20	STAINES POINT	48*	22.000'	N	123*	18.000'	W	090.0	3.4	81.8	10 mins or less	Visual/Radar	GPS	11.82	1.80	12.5	1.35	95	83.63
21	SEA BIRD POINT	48*	24.500'	N	123*	10.500'	W	063.4	5.6	76.3	10 mins or less	Visual/Radar	GPS	11.82	1.80	12.5	1.35	64	52.63
22	BEAUMONT SH	48*	27.000'	N	123*	09.700'	W	012.0	2.6	73.7	10 mins or less	Visual/Radar	GPS	11.82	2.00	12.5	1.35	126	114.83
23	KELP REEFS	48*	33.000'	N	123*	12.000'	W	345.7	6.2	67.5	10 mins or less	Visual/Radar	GPS	11.82	2.00	12.5	1.35	247	235.83
24	TOM PT.	48*	40.000'	N	123*	15.000'	W	344.1	7.3	60.2	10 mins or less	Visual/Radar	GPS	11.82	2.00	12.5	1.35	315	303.83
25	TURN PT.	48*	41.500'	N	123*	15.000'	W	360.0	1.5	58.7	10 mins or less	Visual/Radar	GPS	11.82	2.00	12.5	1.35	144	132.83
26	EAST PT.	48*	45.700'	N	123*	02.000'	W	064.0	9.6	49.2	10 mins or less	Visual/Radar	GPS	11.82	2.20	12.5	1.35	245	234.03
27	PUGET SOUND TSS	48*	49.300'	N	122*	58.000'	W	036.3	4.5	44.7	10 mins or less	Visual/Radar	GPS	11.82	2.20	12.5	1.35	201	190.03
28	PUGET SOUND TSS	48*	54.500'	N	123*	04.500'	W	320.5	6.7	38.0	10 mins or less	Visual/Radar	GPS	11.82	2.20	12.5	1.35	120	109.03
29	ROBERTS BANK	49*	04.500'	N	123*	21.000'	W	312.6	14.8	23.2	10 mins or less	Visual/Radar	GPS	11.82	2.60	12.5	1.35	150	139.43
30	STURGEON BANK	49*	14.600'	N	123*	19.000'	W	007.4	10.2	13.0	10 mins or less	Visual/Radar	GPS	11.82	2.60	12.5	1.35	131	120.43
31	PT. GREY	49*	17.000'	N	123*	18.000'	W	015.3	2.5	10.5	5 mins or less	Visual/Radar	GPS	11.82	2.80	12.5	1.35	60	49.63
32	PT. ATKENSON	49*	18.300'	N	123*	16.000'	W	045.2	1.8	8.7	5 mins or less	Visual/Radar	GPS	11.82	2.80	12	1.24	100	89.74
33	NAVVY JACK PT.	49*	19.200'	N	123*	10.000'	W	077.1	4.0	4.7	5 mins or less	Visual/Radar	GPS	11.82	2.80	12	2.48	28	16.50
34	LIONS GATE BRIDGE	49*	19.000'	N	123*	08.500'	W	101.5	1.0	3.6	5 mins or less	Visual/Radar	GPS	11.82	2.80	10	1.72	22.5	11.76
35	BURNABY SHOAL	49*	18.080'	N	123*	06.500'	W	125.1	1.6	2.1	5 mins or less	Visual/Radar	GPS	11.82	2.80	10	1.72	30	19.26
36	VANCOUVER HR	49*	18.000'	N	123*	05.000'	W	094.7	1.0	1.1	5 mins or less	Visual/Radar	GPS	11.82	2.80	10	1.72	33	22.26
37	VANCOUVER HR	49*	18.000'	N	123*	04.000'	W	090.0	0.7	0.4	5 mins or less	Visual/Radar	GPS	11.82	2.80	6	0.62	19.5	9.86
38	BERTH	49*	18.270'	N	123*	03.520'	W	049.3	0.4	0.0	5 mins or less	Visual/Radar	GPS	11.82	2.80	0		16.1	7.08

Note: Increase in draft forward or aft due to squat effect could be more than mean draft increase. Squat is likely to result in an increase in forward draft if the block coefficient is > 0.7 and increase in aft draft if the block coefficient is < 0.7.

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Section 13B: Arrival Port - Passage from Pilot Station to Anchorage

M.V HAKO

Voyage No. 02

WP	Name/ Reference	Latitude			Longitude			T/CO	DIST	DTG	Position Plotting Interval	METHOD OF POSITION FIXING		UKC CALCULATION AT EVERY WAY POINT (mtr)					
		Deg	Min	'N/S	Deg	Min	'E/W					Primary method	Secondary method	Deepest Draft	Expected Height of Tide	Intended transit Speed	Squat	Min. Charted Depth	UKC
19	VICTORIA P/STN	48*	22.000'	N	123*	23.100'	W			77.9	5 mins or less	Visual/Radar	GPS	11.82	1.60	6	0.31	95	84.47
20	STAINES POINT	48*	22.000'	N	123*	18.000'	W	090.0	3.4	74.5	10 mins or less	Visual/Radar	GPS	11.82	1.80	12.5	1.35	95	83.63
21	SEA BIRD POINT	48*	24.500'	N	123*	10.500'	W	063.4	5.6	68.9	10 mins or less	Visual/Radar	GPS	11.82	1.80	12.5	1.35	64	52.63
22	BEAUMONT SH	48*	27.000'	N	123*	09.700'	W	012.0	2.6	66.4	10 mins or less	Visual/Radar	GPS	11.82	2.00	12.5	1.35	126	114.83
23	KELP REEFS	48*	33.000'	N	123*	12.000'	W	345.7	6.2	60.2	10 mins or less	Visual/Radar	GPS	11.82	2.00	12.5	1.35	247	235.83
24	TOM PT.	48*	40.000'	N	123*	15.000'	W	344.1	7.3	52.9	5 mins or less	Visual/Radar	GPS	11.82	2.00	12.5	1.35	315	303.83
25	TURN PT.	48*	41.500'	N	123*	15.000'	W	360.0	1.5	51.4	5 mins or less	Visual/Radar	GPS	11.82	2.00	12.5	1.35	144	132.83
26	EAST PT.	48*	45.700'	N	123*	02.000'	W	064.0	9.6	41.8	5 mins or less	Visual/Radar	GPS	11.82	2.20	12.5	1.35	245	234.03
27	PUGET SOUND TSS	48*	49.300'	N	122*	58.000'	W	036.3	4.5	37.4	5 mins or less	Visual/Radar	GPS	11.82	2.20	12.5	1.35	201	190.03
28	PUGET SOUND TSS	48*	54.500'	N	123*	04.500'	W	320.5	6.7	30.6	5 mins or less	Visual/Radar	GPS	11.82	2.20	12.5	1.35	120	109.03
29	ROBERTS BANK	49*	04.500'	N	123*	21.000'	W	312.6	14.8	15.9	10 mins or less	Visual/Radar	GPS	11.82	2.60	12.5	1.35	150	139.43
30	STURGEON BANK	49*	14.600'	N	123*	19.000'	W	007.4	10.2	5.7	10 mins or less	Visual/Radar	GPS	11.82	2.60	12	1.24	131	120.54
31	PT. GREY	49*	17.000'	N	123*	18.000'	W	015.3	2.5	3.2	5 mins or less	Visual/Radar	GPS	11.82	2.80	10	0.86	60	50.12
32	PT. ATKENSON	49*	18.300'	N	123*	16.000'	W	045.2	1.8	1.3	5 mins or less	Visual/Radar	GPS	11.82	2.80	6	0.31	100	90.67
39	NO. 1 ANCHORAGE	49*	18.000'	N	123*	14.000'	W	102.9	1.3	0.0	5 mins or less	Visual/Radar	GPS	11.82	2.80	0		52	42.98

Note: Increase in draft forward or aft due to squat effect could be more than mean draft increase. Squat is likely to result in an increase in forward draft if the block coefficient is > 0.7 and increase in aft draft if the block coefficient is < 0.7.

Section 13C: Arrival Port - Passage from EOSP to Anchorage/ Drifting in Open Safe Waters

M.V HAKO

Voyage No. 02

WP	Name/ Reference	Latitude			Longitude			T/CO	DIST	DTG	Position Plotting Interval	METHOD OF POSITION FIXING		UKC CALCULATION AT EVERY WAY POINT (mtr)					
		Deg	Min	'N/S	Deg	Min	'E/W					Primary method	Secondary method	Deepest Draft	Expected Height of Tide	Intended transit Speed	Squat	Min. Charted Depth	UKC
13	QUISTIS POINT	48*	52.108'	N	125*	56.002'	W			7.1	30 mins	Visual/Radar	GPS	11.8	1.8	12.5	1.35	60	48.62
40	DRIFTING	48*	45.000'	N	125*	56.000'	W	180.0	7.1	0.0	30 mins	Visual/Radar	GPS	11.8	1.80	0		84	74.00

Note: Increase in draft forward or aft due to squat effect could be more than mean draft increase. Squat is likely to result in an increase in forward draft if the block coefficient is > 0.7 and increase in aft draft if the block coefficient is < 0.7.

Section 14 A. Instructions for filling UKC Calculation Form

M.V/M.T HAKO Voyage No: 02

1 The vessels name must be filled in the GENERAL INFORMATION page.
2 Go to the UKC Calculation sheet and fill in ONLY the blue shaded cells. Fill in data in ALL the blue cells
3 For Hog, put negative value
4 Fill in the correct block coefficent for the corrected mean draft.
5 The intended transit speed should normally be the maximum maneuvering speed
6 When entering controlling depth data , put negative sign in case the height of tide sea and swell is negative.
7 Remember to correctly choose "Yes" or "No" for whether vessel is in confined waters.

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Section 14 B. UKC CALCULATION (Departure Port)

VESSEL	HAKO	DATE	15-Jul-14
PORT/ AREA	PRINCE RUPERT	LOCAL TIME	1600 LT

Deepest Navigational Draft Calculation (Meter)				Controlling Depth Calculation	
DRAFTS	FORWARD		11.83	Select Unit for entering values in below column	Meter
	AFT		11.83	CHARTED DEPTH	13.90
	a)	MIDSHIPS (P)	11.83	EFFECT OF TIDE (+ / -)	3.55
	b)	MIDSHIPS (S)	11.83	EFFECT OF SEA (-)	0.00
Density used for computing above drafts			1.020	EFFECT OF SWELL (-)	0.00
c)	HOG / SAG ALLOWANCE		0.00	ACTUAL CONTROLLING DEPTH (ii)	17.45
d)	INCREASE IN DRAFT DUE TO LIST (+)		0.00		
CORRECTED MEAN DRAFT(a+b)/2+c+d			11.83	UNDER-KEEL CLEARANCE in Meters	2.93
MAXIMUM DRAFT			11.83	UNDER-KEEL CLEARANCE in Feet	9.62
Block Coefficient for Corrected Mean draft			0.86		
INCREASE DUE TO SQUAT (+)			2.69		
DEEPEST NAVIGATIONAL DRAFT (i)			14.52	IS VESSEL IN CONFINED WATERS?	YES
INTENDED TRANSIT SPEED (KTS)			12.50		

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Section 14 C. UKC CALCULATION (Arrival Port)

VESSEL	HAKO	DATE	17-Jul-14
PORT/ AREA	VANCOUVER	LOCAL TIME	1600 LT

Deepest Navigational Draft Calculation (Meter)				Controlling Depth Calculation	
DRAFTS		FORWARD	11.82	Select Unit for entering values in below column	Meter
		AFT	11.82	CHARTED DEPTH	16.10
	a)	MIDSHIPS (P)	11.82	EFFECT OF TIDE (+ / -)	2.80
	b)	MIDSHIPS (S)	11.82	EFFECT OF SEA (-)	0.00
Density used for computing above drafts			1.025	EFFECT OF SWELL (-)	0.00
c)	HOG / SAG ALLOWANCE		0.00	ACTUAL CONTROLLING DEPTH (ii)	18.90
d)	INCREASE IN DRAFT DUE TO LIST (+)		0.00		
CORRECTED MEAN DRAFT(a+b)/2+c+d			11.82	UNDER-KEEL CLEARANCE in Meters	4.39
MAXIMUM DRAFT			11.82	UNDER-KEEL CLEARANCE in Feet	14.41
Block Coefficient for Corrected Mean draft			0.86		
INCREASE DUE TO SQUAT (+)			2.69		
DEEPEST NAVIGATIONAL DRAFT (i)			14.51	IS VESSEL IN CONFINED WATERS?	YES
INTENDED TRANSIT SPEED (KTS)			12.50		

SQUAT CALCULATION

VESSEL HAKO

BLOCK COEFFICIENT 0.860

Note: Increase in draft forward or aft due to squat effect could be more than mean draft increase. Squat is likely to result in an increase in forward draft if the block coefficient is > 0.7 and increase in aft draft if the block coefficient is < 0.7

OPEN WATERS		CONFINED WATERS	
SPEED	SQUAT	SPEED	SQUAT
knots	meters	knots	meters
3	0.08	3	0.15
4	0.14	4	0.28
5	0.22	5	0.43
6	0.31	6	0.62
7	0.42	7	0.84
8	0.55	8	1.10
9	0.70	9	1.39
10	0.86	10	1.72
11	1.04	11	2.08
12	1.24	12	2.48
13	1.45	13	2.91
14	1.69	14	3.37
15	1.94	15	3.87
16	2.20	16	4.40
17	2.49	17	4.97
18	2.79	18	5.57
19	3.10	19	6.21
20	3.44	20	6.88
21	3.79	21	7.59
22	4.16	22	8.32
23	4.55	23	9.10
24	4.95	24	9.91
25	5.38	25	10.75

Section 15: Master's review of passage plan

M.V/M.T HAKO Voyage No: 02

Dep Port: PRINCE RUPERT Arr. Port: VANCOUVER

	YES	NO	N/A
Section - 1 General information			
Has all relevant information filled up in the Set up Page ?	✓		
Section - 2 Nautical Charts			
Are all charts on board for the passage and are the largest scale charts in use ?	✓		
Has all relevant information including below been filled in for each chart being used?			
Areas where speed reduction is required.	✓		
Areas where two steering motors are required to be switched ON	✓		
Areas where echo sounder should be activated	✓		
Crossing and high density traffic areas	✓		
Call Points' for Master	✓		
Notices to Engine Room	✓		
Manning of Engine Room (UMS Vessels)			✓
Has a proper 'Abort Point' been marked ? Indicate position: N48-21.0W, 123-23.6W	✓		
Has the 'Shallow Water Effect' and 'Banking Effect' been considered ?	✓		
Voyage Charts corrected to NTM no. 22/2014			
Has the designated Pilot Boarding Ground been assessed and found suitable for the manoeuvering characteristics of the vessel ?	✓		
If NO, has an alternate location been identified? Indicate posn:			✓
Section - 3 Publications			
Have all required Publications been identified and relevant information filled in section 3 ? Voyage Publications corrected to NTM no. 22/2014	✓		
Has relevant information been extracted from required publications ?	✓		
Section - 4 Tides & current			
Has all relevant information regarding tides & current filled in section 4 ?	✓		
Section - 5 Weather conditions			
Has the advice from Weather routeing agencies been applied ?	✓		
Section - 6 Reporting details			
Has all relevant reporting requirements as listed in section 6 kept ready for use.?	✓		
Vessels calling/ Departing US ports, duly signed copies of completed passage will be send to office on email ID fleet-ccmnav@fleetship.com ?	✓		
Section - 7 Bridge team management			
Has watch schedule/ manning requirements as per Bridge Team Management discussed with all Navigating officers and Understood ?	✓		
Section - 8 ISPS requirements			
Has the ISPS Section fully filled in and required precautions taken ?	✓		
Section - 9 Environment requirements			
Have all relevant answers been filled up regarding environmental aspect during the voyage ?	✓		

	YES	NO	N/A
Section - 10 Contingencies			
Have all contingencies measures been discussed with the bridge team ?	✓		
Section - 11 Departure port- Waypoints			
Has the Departure port way point list filled in ?	✓		
What is the Minimum expected UKC 8.05			
Are any navigation risk assessments required to be carried out during this leg ?			✓
(Note: Refer to BPM Section 3.2.3.1 for further details).			
Section - 12 Sea passage- Waypoints			
Has the Sea passage way point list filled in ?	✓		
Has a longer route been taken in preference to shorter more hazardous route ?	✓		
Section - 13 Arrival port- Waypoints			
Has the arrival port way point list filled in ?	✓		
What is the Minimum expected UKC 8.98			
Are any navigation risk assessments required to be carried out during this leg ?			✓
(Note: Refer to BPM Section 3.2.3.1 for further details).			
Section - 14 UKC calculation			
Is UKC calculated as per bridge procedure manual Annex 7 ?	✓		

Signature _____ **Master's Name** CAPT. U.K. MISHRA

Date _____ **Time** _____

We undersigned hereby confirm understanding & compliance with above passage plan

Name	Rank	Date/Time	Signature
VISHAL V. MAZGAONKAR	Chief officer		
EDWARD F. INTIA/ JR.	Second officer		
	Third officer		

Section 16: Minor Last Minute Changes to Passage Plan:

Note: Any last minute minor deviations made by the Master before pilot boarding to the intended passage plan, particularly with regards to pilotage and near shore waters should be discussed with duty officer and such details are to be recorded in this section.

Prepared by: _____ Date: _____
(Master)

Above changes have been discussed and understood by:

1. Name: _____ ; Rank: _____ ; Signature: _____
2. Name: _____ ; Rank: _____ ; Signature: _____
3. Name: _____ ; Rank: _____ ; Signature: _____
4. Name: _____ ; Rank: _____ ; Signature: _____

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Section 17: Post Voyage De-Brief of Passage Plan

M.V/M.T HAKO Voyage No: 02

After completion of a passage, the master should take the opportunity to discuss the planning and execution of the passage with his team members. Possible weaknesses should be openly admitted and discussed so that they may be corrected or allowed for in future passages.

Such a de brief need not take long, and can take place during the passage whilst the memory is still fresh in people's minds. Where corrections are made to a planned passage they can be saved for future use.

	YES	NO	N/A
1. Were charts and publications suitable for the voyage ?			

Remarks (if any):

2. Was the bridge team composition adequate or were any changes required ?

Remarks (if any):

3. Were any amendments required to the departure port information (Section 11) ?

Remarks (if any):

4. Were any amendments required to the arrival port information (Section 13A) ?

Remarks (if any):

5. a) Was the UKC experienced during the passage as calculated in the passage plan ?

b) Was there a significant difference between the UKC at the berth(s) and the expected UKC as per calculation ? *UKC at berth(s)* : _____ *UKC as per calculation* : _____

Remarks (if any):

6. Was the position fixing interval stated in the passage plan adequate/ difficult to comply with ?

Remarks (if any):

7. List 'Note worthy efforts' (for example by members of the bridge team, during the various stages of the plan etc.

8. List the scope for improvement in future passage plans:

Master _____ **Sign** _____
Ch/ Off _____ **Sign** _____
2/ Off _____ **Sign** _____
3/ Off _____ **Sign** _____
Addnl Off _____ **Sign** _____
Date _____ **Time** _____